

PATENT  
Patent App. Ser. No. 10/786,494  
The Eclipse Group Docket No. HI08025USU (P03138US)

### AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended)      Array microphone comprising:  
several individual microphones connected ~~with~~ to a signal processor ~~(11)~~ that  
comprises at least one digital filter for each individual microphone, in particular for voice  
recognition; ~~[5]~~  
wherein at least one loudspeaker is arranged in an acquisition range of each of the  
individual microphones; ~~[5]~~  
an electronic circuit configured to apply ~~applies~~ a signal to the loudspeaker ~~(5)~~ in  
~~such a manner that it emits to emit~~ a predetermined periodic noise signal; ~~[5]~~  
~~and that~~ the signal processor ~~(11)~~ configured to evaluate[s] the response signals  
coming from each of the microphones and/or from each of the digital filters as a response  
to the reception of the periodic noise signal; ~~[5]~~ and wherein the signal processor is  
configured to compare the response signals with model signals stored in the signal  
processor or externally.
2. (Currently Amended)      A method for checking array microphones, the method comprising:  
connecting several individual microphones with a signal processor ~~(11)~~; ~~[5]~~  
providing ~~wherein~~ at least one loudspeaker ~~(5)~~ is provided in the acquisition range  
of each of the individual microphones; ~~and~~  
providing ~~connected with~~ a signal processor ~~(11)~~ connected to the at least one  
loudspeaker and to to which each microphone is ~~also connected~~; ~~[5]~~  
emitting ~~and that the signal processor (11) emits~~ a predetermined periodic noise  
signal via the loudspeaker; ~~[5]~~ ~~wherein the signal processor (11) evaluates~~  
evaluating at least one the response signals ~~that subsequently come~~ from each  
individual microphone ~~(1-4)~~ and/or from each of the digital filters; ~~[5]~~ ~~and~~  
comparing the at least one response signal ~~compares them~~ with at least one model  
signals stored in the signal processor ~~(11)~~ or externally, and which correspond to properly  
operating individual microphones ~~(1-4)~~ or properly operating filters; ~~[5]~~ ~~and~~

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providing that the signal processor (11) provides a display in the form of a message and/or stores storing the comparison results deviation of the response signals from the model signals.

3. (Currently Amended) The method according to Claim 2, ~~wherein the signal processor;~~  
further comprising:

before emitting a predetermined periodic noise signal via the loudspeaker,  
verifying carries out a verification of the loudspeaker by applying (5), where the  
loudspeaker signal is directly applied to the AID converter (9) and operating the said  
loudspeaker is operated in parallel to the input impedance of the AID converter (9), and  
where the loudspeaker forming a voltage divider (5), together with the output resistance  
of the output amplifier that (7) which operates the loudspeaker; (5), forms a voltage  
divider, and that

recording the signal applied to the AID converter; (9) is recorded and evaluated  
evaluating the signal by comparing this signal with a reference signal that  
originates from the measurement with a reference impedance instead of the loudspeaker  
impedance.

4. (Currently Amended) A method Method according to Claim 3 further comprising:  
characterized in that verifying the ratio of the loudspeaker impedance to the input  
impedance of the AID converter; (9) is verified and  $i_1$ ;

if it deviates too far from the value of 1, adding is adjusted by an additional pre-  
resistance, which is switched in front of the loudspeaker (5).

5. (Currently Amended) A method Method for the automatically calibrating calibration of  
array microphones, comprising having several individual microphones (1-4) connected to  
a signal processor having (11) that comprises at least one digital filter for each individual  
microphone, the method comprising:

whereby the signal processor (11) increases increasing the sound power  
concentration of the array microphone and suppressing suppresses lateral sound sources  
by means of applying an appropriate algorithm applied to the individual microphone  
signals, the algorithm components including whereby filter coefficient sets used in the  
digital filters and which are characteristic of for the arrangement, type, sensitivity, and

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characteristics of the ~~used individual~~ microphones (1-4);<sub>1</sub> the acoustical environment;<sub>1</sub> and the location of the sound sources ~~are components of the algorithm;<sub>1</sub>~~ characterized in that

providing at least one loudspeaker (5) ~~is provided~~ in the acquisition range of each individual microphone (1-4), which the loudspeaker is connected to with a signal processor (11), to which is connected to each individual microphone (1-4) is also connected;<sub>1</sub> in that the signal processor (11)

emitting ~~emits via the loudspeaker (5),~~ a predetermined periodic noise signal via the loudspeaker via the loudspeaker; ~~that the signal processor (11) evaluates~~

evaluating the response signals ~~that subsequently come from each individual microphone (1-4) and/or from each digital filter;<sub>1</sub> and compares them~~

comparing the response signals with model signals ~~which are stored in the signal processor (11), or externally, and which correspond to properly operating individual microphones (1-4) or properly operating digital filters via the loudspeaker;<sub>1</sub> and that the signal processor (11), as a function of the deviation of the response signals from the model signals, changes~~

changing the value of individual filter coefficients or of all the filter coefficients of the filter coefficient set as a function of the deviation of the response signals from the model signals;<sub>1</sub> and repeats

repeating the test until the response signals are in the range of the model signals.

6. (Currently Amended) A method ~~Method~~ according to Claim 5, characterized in that, further comprising:

interrupting the test after a predetermined number of test repetitions have been carried out;<sub>1</sub> ~~the test is interrupted and~~

displaying and/or storing an error message ~~is displayed and/or stored.~~